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TERMINAL (ENTER 1, 2, 3, OR ?):2


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 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2          "Ask CAS" for self-help around the clock
 NEWS  3  JAN 27  Source of Registration (SR) information in REGISTRY updated
                  and searchable
 NEWS  4  JAN 27  A new search aid, the Company Name Thesaurus, available in
                  CA/CAplus
 NEWS  5  FEB 05  German (DE) application and patent publication number format
                  changes
 NEWS  6  MAR 03  MEDLINE and LMEDLINE reloaded
 NEWS  7  MAR 03  MEDLINE file segment of TOXCENTER reloaded
 NEWS  8  MAR 03  FRANCEPAT now available on STN
 NEWS  9  MAR 29  Pharmaceutical Substances (PS) now available on STN
 NEWS 10  MAR 29  WPIFV now available on STN
 NEWS 11  MAR 29  No connect hour charges in WPIFV until May 1, 2004
 NEWS 12  MAR 29  New monthly current-awareness alert (SDI) frequency in RAPRA

 NEWS EXPRESS  MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 13 APRIL 2004
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
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  * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:07:23 ON 23 APR 2004

=> file caplus
COST IN U.S. DOLLARS                                   SINCE FILE     TOTAL
                                                            ENTRY   SESSION
FULL ESTIMATED COST                                          0.21      0.21

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FILE COVERS 1907 - 23 Apr 2004  VOL 140 ISS 18
FILE LAST UPDATED: 22 Apr 2004  (20040422/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s esterf? (l) carboxylic acid (l) olefin?
           320 ESTERF?
        216197 CARBOXYLIC
            46 CARBOXYLICS
        216215 CARBOXYLIC
                 (CARBOXYLIC OR CARBOXYLICS)
       3808314 ACID
       1429795 ACIDS
       4274410 ACID
                 (ACID OR ACIDS)
        198970 CARBOXYLIC ACID
                 (CARBOXYLIC(W)ACID)
        158418 OLEFIN?
L1           1 ESTERF? (L) CARBOXYLIC ACID (L) OLEFIN?

=> s esterif? (l) carboxylic acid (l) olefin?
        120888 ESTERIF?
        216197 CARBOXYLIC
            46 CARBOXYLICS
        216215 CARBOXYLIC
                 (CARBOXYLIC OR CARBOXYLICS)
       3808314 ACID
       1429795 ACIDS
       4274410 ACID
                 (ACID OR ACIDS)
        198970 CARBOXYLIC ACID
                 (CARBOXYLIC(W)ACID)
        158418 OLEFIN?
L2         183 ESTERIF? (L) CARBOXYLIC ACID (L) OLEFIN?

=> s l2 and perfluorinat?
          4685 PERFLUORINAT?
L3           1 L2 AND PERFLUORINAT?

=> d l3 ibib ab

L3   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1991:607509  CAPLUS
DOCUMENT NUMBER:          115:207509
TITLE:                    Preparation of alcohols from olefins
INVENTOR(S):              Drent, Eit
PATENT ASSIGNEE(S):       Shell Internationale Research Maatschappij B. V.,
                          Neth.
SOURCE:                   Brit. UK Pat. Appl., 15 pp.
                          CODEN: BAXXDU
DOCUMENT TYPE:            Patent
```

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LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
     ---------------  ----  --------      ---------------  --------
     GB 2238539        A1   19910605      GB 1989-26983    19891129
PRIORITY APPLN. INFO.:                 GB 1989-26983       19891129
AB   Alcs. were prepared by reaction of olefins with a perfluorinated
     carboxylic acid in the presence of a very strong sulfonic acid catalyst at
     -15 to +130° to give an ester, followed by hydrolysis of the ester
     at -15 to +100°.  Thus, 1-butene, CF3CO2H, and Nafion NR 501 cation
     exchanger were heated in sulfolane at 60° to give sec-Bu
     trifluoroacetate (I).  Removal of the resin and overnight reaction with
     H2O led to sec-BuOH; .apprx.60% of I was hydrolyzed to the alc.


=> d his

     (FILE 'HOME' ENTERED AT 11:07:23 ON 23 APR 2004)

     FILE 'CAPLUS' ENTERED AT 11:07:40 ON 23 APR 2004
L1            1 S ESTERF? (L) CARBOXYLIC ACID (L) OLEFIN?
L2          183 S ESTERIF? (L) CARBOXYLIC ACID (L) OLEFIN?
L3            1 S L2 AND PERFLUORINAT?

=> s l2 and tetrafluoroethylene
         23746 TETRAFLUOROETHYLENE
            35 TETRAFLUOROETHYLENES
         23753 TETRAFLUOROETHYLENE
                 (TETRAFLUOROETHYLENE OR TETRAFLUOROETHYLENES)
L4            0 L2 AND TETRAFLUOROETHYLENE
```

First Hit Fwd Refs

☐ Generate Collection Print

L7: Entry 28 of 34 File: USPT Jul 3, 1984

DOCUMENT-IDENTIFIER: US 4458088 A
TITLE: Continuous process for the extraction and esterification of carboxylic acid

Brief Summary Text (3):
This invention relates to a continuous process for the extraction and esterification of carboxylic acids. More specifically, this invention relates to a process for the extraction of a first carboxylic acid, denoted RCO.sub.2 H, from an aqueous stream into an organic stream. This organic stream may comprise a carboxylic acid ester reactant, denoted R"CO.sub.2 R'. The ester reactant, R"CO.sub.2 R', and the first acid, RCO.sub.2 H, are contacted with a catalyst to form a product carboxylic acid ester, denoted RCO.sub.2 R', and a second carboxylic acid, denoted R"CO.sub.2 H. The reactant ester, R"CO.sub.2 R', is regenerated by esterifying the second acid, R"CO.sub.2 H. The reactant ester, R"CO.sub.2 R', is then recycled to the process. In this process R is aliphatic or aromatic, R' is alkyl and R" is aromatic or aliphatic having at least about 4 carbon atoms. Where the ester reactant is a bifunctional polymer, having both sulfonic acid and R' carboxylic acid ester pendant functional groups, this process can be performed in the absence of a catalyst.

Brief Summary Text (12):
In many known commercial operations for producing carboxylic acids the product is recovered from the reactor in a dilute aqueous solution. Since most esterification reactions require that the reactants be in concentrated form, extra steps are required to concentrate the carboxylic acid from a product stream before the acid can be introduced to an esterification process. These extra steps, such as distillation, are often expensive, may result in product losses and impede a smooth coupling of the esterification process with the process producing the carboxylic acid.

Brief Summary Text (33):
In accordance with the objects and purposes stated above, a further aspect of the present invention may also comprise the esterification of a carboxylic acid, RCO.sub.2 H, wherein R is aryl, alkyl or alkenyl, R' is alkyl having about 8 or less carbon atoms, and where R" is aromatic or aliphatic having at least about 4 carbon atoms.

Detailed Description Text (15):
The catalyst may be either a strong acid of pKa of about 2.0 or less, such as H.sub.2 SO.sub.4 or HCl, a metal salt which is a Lewis acid, such as SnCl.sub.2, or a strong base with a pKa of about 10.0 or more, such as KOH or NaOH. While the catalyst may be a soluble compound, such as H.sub.2 SO.sub.4, it is preferred that the catalyst be a resin which is a highly stable, insoluble matrix capable of carrying functional groups, due to the ease of recovering a resin from the reaction mixture. Preferably this resin is a perfluoro sulfonic acid polymer, such as acid exchanged Nafion-501 or Nafion-511, (obtainable from E. I. du Pont) or a phenyl sulfonic acid on polystyrene, such as Dowex 50 (obtainable from the Dow Chemical Company).

Detailed Description Text (38):
An experiment was conducted to demonstrate the feasibility of esterifying the first

acid, RCO.sub.2 H, with the reactant ester, R"CO.sub.2 R', and continuously distilling the product ester, RCO.sub.2 R'. Accordingly, 29.23 g methacrylic acid, 181.80 g methyl octanoate and 13.47 g Nafion-501 resin were combined in a 1.0 liter flask. Approximately 100 mg. of hydroquinone was also added as a polymerization inhibitor. The flask was heated at atmospheric pressure, during which a solution of hydroquinone in methyl octanoate was dripped into the reaction mixture. 28.63 g of methyl methacrylate, as identified by gas chromatography, was distilled continuously at an overhead temperature of about 75.degree.-110.degree. C. to give a methyl methacrylate yield of 85.29%.

Detailed Description Text (40):
An experiment was performed to demonstrate the feasibility of re-esterifying the acid, R"CO.sub.2 H, to obtain the ester, R"CO.sub.2 R'. Octanoic acid, 23.4 g, was mixed with 48 g of methanol and 12 g of Nafion-501. Methyl octanoate, 106.6 g, was added to simulate the effluent of an acid esterification reactor. The mixture was refluxed at approximately 70.degree. C. for 6 hours and then allowed to cool to room temperature. The mixture was then extracted three times with 200 ml H.sub.2 O per extraction to remove water and any unreacted methanol. Gas chromatography of the organic layer revealed that 88% of the octanoic acid had been re-esterified to methyl octanoate.

Detailed Description Text (45):
An esterification experiment was performed by combining 131.76 g of methyl octanoate, 20.00 g of acrylic acid, 15 g of Nafion-511 resin and 0.5 g phenothiazine in a flask. The flask was heated with a heating mantle and stirred by a magnetic stirrer. The flask was heated slowly to a pot temperature of approximately 65.degree. C. The product ester, methyl acrylate, was continuously distilled into a flask containing approximately 0.5 g of phenothiazine. A solution of phenothiazine in methyl octanoate was dripped into the distillation column to inhibit polymerization. When the pot temperature began to approach the boiling point of methyl octanoate, the distillation was terminated. A total of 23.46 g of distillate was obtained. Gas chromatography revealed this product to be 90.19% methyl acrylate. Thus this process resulted in a 88.57% yield of methyl acrylate based on the amount of acrylic acid charged to the reaction.

Detailed Description Text (48):
Nafion-511, 15.12 g, 19.99 g of 99% isobutyric acid and 107.75 g of methyl octanoate were placed in a flask. The flask was heated by an electric mantle and stirred by a magnetic stirrer. The product was distilled at an overhead temperature of about 90.degree. C. When the overhead temperature began dropping, the distillation was terminated. 22.35 g of organic product was obtained. Analysis by gas chromatography revealed that 22.08 g of methyl isobutyrate was contained in the distillation product, or 96.26% of the possible theoretical yield.

Detailed Description Text (51):
An esterification experiment was performed by combining 143.43 g of ethyl octanoate, 20.00 g of acrylic acid, 15.0 g of Nafion-511, and approximately 1 g of phenothiazine in a flask. A 1% phenothiazine in ethyl octanoate solution was slowly dripped into the reaction mixture. The flask was heated with an electric mantle and stirred by a magnetic stirrer. The product was continuously distilled at an overhead temperature of approximately 63.degree.-90.degree. C. When the pot temperature reached 202.degree. C., distillation was terminated. A total of 25.96 g of distillate was obtained. Ethyl acrylate was identified by boiling point as the product.

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L7: Entry 30 of 34 File: USPT Jul 28, 1981

DOCUMENT-IDENTIFIER: US 4281176 A
TITLE: Preparation of ethyl carboxylates

Brief Summary Text (11):
It too has surprisingly and unexpectedly been shown, consistent herewith, that the necessary combination of the use of an acid catalyst and the presence of the noted particular type of solvent makes it possible to achieve this advance in the art, and, in contrast to the known prior art, enables successful esterification of a variety of carboxylic acids.

Detailed Description Paragraph Table (1):
TABLE I Ace- Ex- tic Temp- am- CATALYST TMS acid era- ple mol/ in in ture No. Nature liter mol mol .degree.C. DC% DC.sub.0 % 1 H.sub.2 SO.sub.4 0.925 0.821 0.353 150 33.4 3.5 2 CH.sub.3 SO.sub.3 H 1.00 0.822 0.345 160 16.5 .epsilon. ##STR1## 0.50 0.793 0.342 160 50.7 4.9 4 CH.sub.3 SO.sub.3 H 0.326 0.6 0.6 150 75.0 9.3 5.sup.(x) C.sub.6 F.sub.13 SO.sub.3 H 0.158 0.604 0.601 160 54.2 -- 6.sup.(xx) resin 10 g 0.60 0.608 160 25.0 -- 7 CH.sub.3 SO.sub.3 C.sub.2 H.sub.5 0.322 0.60 0.60 150 80 - - .sup.(x) This experiment was carried out using an ethylene pressure of 30 bars for 2 hours, 30 minutes. .sup.(xx) This experiment was carried out using 10 g of a perfluorosulfonic acid resin marketed under the trademark NAFION (duratio of the experiment: 3 hours). This resin contains copolymers of perfluoroethylene with a perfluorovinyl ether, the said ether bearing sulfonic acid groups. In the last column (DC.sub.0 %) .epsilon. means undeterminable (too small); means nondetermined.

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 NEWS  3  JAN 27  Source of Registration (SR) information in REGISTRY updated
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                 changes
 NEWS  6  MAR 03  MEDLINE and LMEDLINE reloaded
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 NEWS  8  MAR 03  FRANCEPAT now available on STN
 NEWS  9  MAR 29  Pharmaceutical Substances (PS) now available on STN
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 NEWS 11  MAR 29  No connect hour charges in WPIFV until May 1, 2004
 NEWS 12  MAR 29  New monthly current-awareness alert (SDI) frequency in RAPRA

 NEWS EXPRESS  MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 13 APRIL 2004
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 NEWS LOGIN    Welcome Banner and News Items
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=> file caplus
COST IN U.S. DOLLARS                              SINCE FILE     TOTAL
                                                       ENTRY   SESSION
FULL ESTIMATED COST                                     0.21      0.21

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FILE COVERS 1907 - 23 Apr 2004  VOL 140 ISS 18
FILE LAST UPDATED: 22 Apr 2004  (20040422/ED)

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  substance identification.


=> s ep 0503688/pn
L1           1 EP 0503688/PN
                 (EP503688/PN)

=> d l1 iall

L1   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1987:599097  CAPLUS
DOCUMENT NUMBER:          107:199097
ENTRY DATE:               Entered STN:  27 Nov 1987
TITLE:                    Method for depositing a fluorocarbonsulfonic acid
                          polymer on a support from a solution
INVENTOR(S):              Martin, Charles W.; Ezzell, Bobby R.; Weaver, John D.
PATENT ASSIGNEE(S):       Dow Chemical Co., USA
SOURCE:                   U.S., 5 pp.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
INT. PATENT CLASSIF.:
            MAIN:         B32B027-00
       SECONDARY:         B05D003-02; B05D007-22
US PATENT CLASSIF.:       428421000
CLASSIFICATION:           35-3 (Chemistry of Synthetic High Polymers)
                          Section cross-reference(s): 38
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.       KIND  DATE           APPLICATION NO.  DATE
     ---------------  ----  --------       ---------------  --------
     US 4661411        A    19870428       US 1986-832627   19860225
     EP 235998         A2   19870909       EP 1987-301319   19870216
     EP 235998         A3   19880608
         R:  BE, DE, FR, GB, IT, NL
     EP 503688         A2   19920916       EP 1992-110111   19870216 <--
     EP 503688         A3   19920923
         R:  BE, DE, FR, GB, IT, NL
     JP 62230805       A2   19871009       JP 1987-39321    19870224
     CA 1268083        A1   19900424       CA 1987-530402   19870224
PRIORITY APPLN. INFO.:                  US 1986-832626   19860225
                                        US 1986-832627   19860225
                                        US 1986-947788   19861230
ABSTRACT:
A heterogeneous acid catalyst is prepared by treating a carrier with a solution of a
fluorocarbonsulfonic acid polymer in a solvent, removing the solvent, and
heat-treating the coated carrier in such a way so as to prevent the polymer
being leached off the carrier.  Thus, an alumina catalyst support was soaked in
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a 9.4% solution of (CF2CF2)a[C(OCF2CF2SO3H)FCF2]b (a, b = nos. to provide equivalent
weight of the polymer about 930 g/equiv) in 50% EtOH and the solvent was removed
under vacuum to give a coated support, which was heated at 175° for 72
h, washed with boiling EtOH for 30 min, dried at 100° for 2 h, and
titrated.  The coated alumina contained 4.60% of the polymer and had acid
capacity 0.0495 mequiv/g.

SUPPL. TERM:       fluorocarbonsulfonic acid polymer catalyst prepn
INDEX TERM:        Catalysts and Catalysis
                      (fluorinated polymers having sulfonic acid group-containing
                      pendant chains, preparation of supported)
INDEX TERM:        Fluoropolymers
                   ROLE: PREP (Preparation)
                      (with pendant chains containing sulfonic acid groups,
                      catalysts, preparation of supported)
INDEX TERM:        111173-25-2P
                   ROLE: CAT (Catalyst use); PREP (Preparation); USES (Uses)
                      (catalysts, supported, preparation of)


=> s ep 0367408/pn
L2            4 EP 0367408/PN
                  (EP367408/PN)

=> d l2 iall

L2   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        1990:531728  CAPLUS
DOCUMENT NUMBER:         113:131728
ENTRY DATE:              Entered STN:  13 Oct 1990
TITLE:                   Heteropoly acid and sulfonated ion exchange resin
                         catalysts for production of phenol and acetone from
                         cumene hydroperoxide
INVENTOR(S):             Knifton, John F.; Sanderson, John R.
PATENT ASSIGNEE(S):      Texaco Chemical Co., USA
SOURCE:                  U.S., 8 pp.
                         CODEN: USXXAM
DOCUMENT TYPE:           Patent
LANGUAGE:                English
INT. PATENT CLASSIF.:
            MAIN:        C07C037-08
       SECONDARY:        C07C045-53
US PATENT CLASSIF.:      568798000
CLASSIFICATION:          25-10 (Benzene, Its Derivatives, and Condensed
                         Benzenoid Compounds)
FAMILY ACC. NUM. COUNT:  4
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     US 4898995         A    19900206       US 1988-261817   19881024
     EP 367408          A2   19900509       EP 1989-310111   19891003 <--
     EP 367408          A3   19910612
         R:  DE, FR, GB, IT
     JP 02169529        A2   19900629       JP 1989-275103   19891024
PRIORITY APPLN. INFO.:                   US 1988-261817      19881024
                                         US 1988-261818      19881024
                                         US 1988-261819      19881024
                                         US 1989-324118      19890317
OTHER SOURCE(S):         CASREACT 113:131728
ABSTRACT:
PhOH and Me2CO are prepared simultaneously by decomposition of PhCMe2OOH (I) over a
heteropoly acid or a sulfonated ion exchange resin catalyst.  A mixture of 60.0 g
Me2CO and 5.0 g H3PW12O40 on TiO2 (preparation given) was refluxed, 40.0 g 80% I was
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added dropwise at ≤80°, and the mixture was refluxed to give Me2CO
70.9, PhOH 19.6, cumene 6.7, PhCMe:CH2 1.4, mesityl oxide 0.3, and PhCMe2OH 0.3
weight% with a quant. conversion of I.  Also used were molybdophosphoric acid on
TiO2, molybdosilicic acid on TiO2, tungstosilicic acid on TiO2, Amberlyst
XN-1010, and Amberlite IR-118.

SUPPL. TERM:        decompn cumene hydroperoxide heteropoly acid; acetone
                    simultaneous prodn phenol; ion exchange resin decompn
                    catalyst
INDEX TERM:         Heteropoly acids
                    ROLE: CAT (Catalyst use); USES (Uses)
                       (catalysts, for decomposition of cumene hydroperoxide)
INDEX TERM:         Ion exchangers
                       (catalysts, sulfonated, for decomposition of cumene
                       hydroperoxide)
INDEX TERM:         1343-93-7, 12 Tungstophosphoric acid   11104-88-4,
                    Molybdophosphoric acid   11104-89-5, Molybdosilicic acid
                    51108-82-8, Amberlite IR 118   54991-00-3, Amberlyst XN 1010
                    113857-50-4, Tungstosilicic acid
                    ROLE: CAT (Catalyst use); USES (Uses)
                       (catalyst, for decomposition of cumene hydroperoxide)
INDEX TERM:         80-15-9, Cumene hydroperoxide
                    ROLE: RCT (Reactant); RACT (Reactant or reagent)
                       (decomposition of, acetone and phenol from)
INDEX TERM:         98-82-8P, Cumene   98-83-9P, α Methylstyrene,
                    preparation
                    ROLE: FORM (Formation, nonpreparative); PREP (Preparation)
                       (formation of, in decomposition of cumene hydroperoxide)
INDEX TERM:         108-95-2P, Phenol, preparation
                    ROLE: PREP (Preparation)
                       (simultaneous production of, with acetone, from cumene
                       hydroperoxide, catalysts for)
INDEX TERM:         67-64-1P, Acetone, preparation
                    ROLE: PREP (Preparation)
                       (simultaneous production of, with phenol, from cumene
                       hydroperoxide, catalysts for)


=> s ep 0324080/pn
L3            1 EP 0324080/PN
                  (EP324080/PN)

=> d l3 iall

L3   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1989:633860  CAPLUS
DOCUMENT NUMBER:          111:233860
ENTRY DATE:               Entered STN:  23 Dec 1989
TITLE:                    Method for purification of ion-exchange resins used in
                          production of bisphenol A
INVENTOR(S):              Faler, Gary Ray
PATENT ASSIGNEE(S):       General Electric Co., USA
SOURCE:                   Eur. Pat. Appl., 8 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
INT. PATENT CLASSIF.:
           MAIN:          B01J031-10
         SECONDARY:       B01J037-06; C07C037-20; B01J031-40
CLASSIFICATION:           35-2 (Chemistry of Synthetic High Polymers)
                          Section cross-reference(s): 25, 38
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:
     PATENT NO.        KIND  DATE            APPLICATION NO.   DATE
     ---------------   ----  --------        ---------------   --------
     EP 324080          A1   19890719        EP 1988-119310    19881121 <--
     EP 324080          B1   19920205
         R:  DE, FR, GB, IT, NL
     US 4847432         A    19890711        US 1987-137983    19871228
     JP 01231945        A2   19890918        JP 1988-329550    19881228
PRIORITY APPLN. INFO.:                    US 1987-137983       19871228
ABSTRACT:
Destabilizing impurities are removed from the title (sulfonated) ion exchangers
by treatment with bases and then with strong acids.  Divinylbenzene-crosslinked
(1%) sulfonated polystyrene cation exchanger was treated with 5% NaOH and then
with 2.5% H2SO4 and used in production of bisphenol A.

SUPPL. TERM:        bisphenol A prepn catalyst; divinylbenzene copolymer
                    sulfonated catalyst; sodium hydroxide purifn cation
                    exchanger; sulfuric acid purifn cation exchanger; cation
                    exchanger catalyst purifn; styrene copolymer sulfonated
                    catalyst
INDEX TERM:         Acids, uses and miscellaneous
                    Bases, uses and miscellaneous
                    ROLE: USES (Uses)
                       (cation exchanger catalyst purification by treatment with)
INDEX TERM:         Condensation reaction catalysts
                       (cation exchangers, for phenol with acetone, purification of)
INDEX TERM:         Cation exchangers
                       (catalysts, purification of, by base-acid treatment)
INDEX TERM:         Acrylic polymers, uses and miscellaneous
                    Phenolic resins, uses and miscellaneous
                    ROLE: CAT (Catalyst use); USES (Uses)
                       (sulfo-containing, catalysts, purification of, by base-acid
                       treatment)
INDEX TERM:         9003-70-7DP, Divinylbenzene-styrene copolymer, sulfonated
                    ROLE: CAT (Catalyst use); PREP (Preparation); USES (Uses)
                       (catalysts, purification of, by base-acid treatment)
INDEX TERM:         104-15-4, uses and miscellaneous   1310-58-3, Potassium
                    hydroxide, uses and miscellaneous   1310-65-2, Lithium
                    hydroxide   1310-73-2, Sodium hydroxide, uses and
                    miscellaneous   7647-01-0, Hydrochloric acid, uses and
                    miscellaneous   7664-41-7, Ammonia, uses and miscellaneous
                    7664-93-9, Sulfuric acid, uses and miscellaneous
                    7697-37-2, Nitric acid, uses and miscellaneous
                    ROLE: USES (Uses)
                       (cation exchanger catalyst purification by treatment with)
INDEX TERM:         80-05-7P, uses and miscellaneous
                    ROLE: IMF (Industrial manufacture); PREP (Preparation)
                       (manufacture of, catalysts for, cation exchanger purification
as)


=> s fr 1248426/pn
L4             0 FR 1248426/PN
                   (FR1248426/PN)

=> s ep 0338309/pn
L5             1 EP 0338309/PN
                   (EP338309/PN)

=> d l5 iall

L5   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1990:216208  CAPLUS
DOCUMENT NUMBER:          112:216208
ENTRY DATE:               Entered STN:  09 Jun 1990
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TITLE:                     Process for the isomerization of terminal alkenes to
                           internal alkenes
INVENTOR(S):               Schleppinghoff, Bernhard; Koehler, Hans Dieter; Gabel,
                           Christian; Scheef, Hans Volker
PATENT ASSIGNEE(S):        EC Erdoelchemie G.m.b.H., Fed. Rep. Ger.
SOURCE:                    Eur. Pat. Appl., 14 pp.
                           CODEN: EPXXDW
DOCUMENT TYPE:             Patent
LANGUAGE:                  German
INT. PATENT CLASSIF.:
            MAIN:          C07C005-25
       SECONDARY:          C07C007-163; C07C002-28; C07C041-06
CLASSIFICATION:            23-2 (Aliphatic Compounds)
FAMILY ACC. NUM. COUNT:    1
PATENT INFORMATION:

     PATENT NO.       KIND  DATE           APPLICATION NO.   DATE
     ---------------  ----  --------       ---------------   --------
     EP 338309         A2   19891025       EP 1989-105798    19890403 <--
     EP 338309         A3   19891123
     EP 338309         B1   19931124
         R:  DE, FR, GB, IT
     DE 3812683        A1   19891102       DE 1988-3812683   19880416
     US 5008466        A    19910416       US 1989-336926    19890412
PRIORITY APPLN. INFO.:                  DE 1988-3812683      19880416
ABSTRACT:
The title isomerization process comprises the treatment with H of terminal
alkenes or hydrocarbon distillation fractions containing them in the presence of
macroporous or gel-like cation exchanger catalysts in H+ form, containing 0.001-10
g of subGroup VI, VII, and/or VIII metal(s) as element(s) per L of the dry
exchanger, at 0-120° and a liquid space hourly velocity of 0.1-10/h.  The
title alkenes were simultaneously hydrogenated and oligomerized or, optionally,
etherified with MeOH to produce tert-BuOMe.

SUPPL. TERM:         alkene isomerization cation exchanger catalyst; ether methyl
                     tertiary butyl
INDEX TERM:          Isomerization catalysts
                        (cation exchanger and palladium-doped cation exchanger,
                        for internal alkenes)
INDEX TERM:          Isomerization
                        (of terminal alkenes, internal alkenes from)
INDEX TERM:          Alkenes, reactions
                     ROLE: RCT (Reactant); RACT (Reactant or reagent)
                        (C4, isomerization of terminal, catalysts for, internal
                        alkenes from)
INDEX TERM:          Alkenes, reactions
                     ROLE: RCT (Reactant); RACT (Reactant or reagent)
                        (C4-5, terminal, isomerization of, internal alkenes from)
INDEX TERM:          Alkanes, preparation
                     ROLE: SPN (Synthetic preparation); PREP (Preparation)
                        (C8-20, preparation of, by hydrogenation-oligomerization of
                        terminal alkenes)
INDEX TERM:          67-56-1, Methanol, reactions
                     ROLE: RCT (Reactant); RACT (Reactant or reagent)
                        (addition of, to terminal alkenes, catalysts for)
INDEX TERM:          127004-74-4, Lewatit CPC 118
                     ROLE: CAT (Catalyst use); USES (Uses)
                        (catalyst, for isomerization of terminal alkenes,
                        internal alkenes from)
INDEX TERM:          109-66-0P, Pentane, preparation
                     ROLE: FORM (Formation, nonpreparative); PREP (Preparation)
                        (formation of, in hydrogenation-isomerization of terminal
                        alkenes)
INDEX TERM:          106-99-0, Butadiene, reactions
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                    ROLE: RCT (Reactant); RACT (Reactant or reagent)
                       (hydrogenation of, in isomerization of terminal alkenes)
INDEX TERM:         563-45-1, 3-Methyl-1-butene   563-46-2, 2-Methyl-1-butene
                    ROLE: RCT (Reactant); RACT (Reactant or reagent)
                       (hydrogenation-isomerization of, in preparation of internal
                       alkenes, catalysts for)
INDEX TERM:         106-98-9, 1-Butene, reactions   115-11-7, Isobutene,
                    reactions
                    ROLE: RCT (Reactant); RACT (Reactant or reagent)
                       (isomerization of, in preparation of internal alkenes,
                       catalysts for)
INDEX TERM:         107-01-7P, 2-Butene   513-35-9P, 2-Methyl-2-butene
                    ROLE: SPN (Synthetic preparation); PREP (Preparation)
                       (preparation of, by isomerization of terminal alkenes,
                       catalysts for)
INDEX TERM:         1634-04-4P, Methyl tert-butyl ether
                    ROLE: SPN (Synthetic preparation); PREP (Preparation)
                       (preparation of, from methanol and isobutene, catalysts for)
INDEX TERM:         3375-31-3
                    ROLE: RCT (Reactant); RACT (Reactant or reagent)
                       (reaction of, with cation exchanger, alkene isomerization
                       catalyst from)


=> s ep 0288295/pn
L6           1 EP 0288295/PN
                 (EP288295/PN)

=> d l6 iall

L6   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1989:215191  CAPLUS
DOCUMENT NUMBER:          110:215191
ENTRY DATE:               Entered STN:  10 Jun 1989
TITLE:                    Process for the production of 2,3-dimethylbutene-1
                          from propene
INVENTOR(S):              Kent, Alexander George; Macalpine, Derek Kenneth;
                          Lawrenson, Malcolm John
PATENT ASSIGNEE(S):       BP Chemicals Ltd., UK
SOURCE:                   Eur. Pat. Appl., 14 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
INT. PATENT CLASSIF.:
             MAIN:        C07C011-107
        SECONDARY:        C07C002-36; C07C005-25
CLASSIFICATION:           45-4 (Industrial Organic Chemicals, Leather, Fats, and
                          Waxes)
                          Section cross-reference(s): 23
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     EP 288295          A1   19881026      EP 1988-303636   19880421 <--
     EP 288295          B1   19920701
         R:  AT, BE, CH, DE, ES, FR, GB, IT, LI, NL
     AU 8814778         A1   19881027      AU 1988-14778    19880420
     AU 613024          B2   19910725
     US 4835328         A    19890530      US 1988-184399   19880421
     AT 77814           E    19920715      AT 1988-303636   19880421
     ES 2032554         T3   19930216      ES 1988-303636   19880421
     IN 175450          A    19950617      IN 1988-DE346    19880421
     JP 63280031        A2   19881117      JP 1988-98420    19880422
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JP 2577772	B2	19970205			
CA 1279660	A1	19910129	CA 1988-564826		19880422
CN 1032335	A	19890412	CN 1988-102392		19880423
CN 1014403	B	19911023			
IN 183185	A	19991002	IN 1991-DE390		19910501
PRIORITY APPLN. INFO.:			GB 1987-9648	A	19870423
			EP 1988-303636	A	19880421
			IN 1988-DE346	A1	19880421

ABSTRACT:

The title compound (I) is prepared without complicated separation by converting propene to a product principally containing 2,3-dimethyl-2-butene (II), separating II and isomerizing II to I. Dimerization of propene by Ni acetylacetonate/tricyclohexylphosphine in PhMe, distilling the C6 olefin product to yield 99% pure II, and isomerizing II over 10% Na on alumina in a distillation column gave 99.9% pure I.

SUPPL. TERM: propene dimerization dimethylbutene prepn; isomerization dimethylbutene sodium alumina catalyst

INDEX TERM: Dimerization catalysts
(nickel acetylacetonate, with tricyclohexylphosphine, for propene)

INDEX TERM: Isomerization catalysts
(sodium or potassium on alumina, for dimethylbutene)

INDEX TERM: Alkenes, preparation
ROLE: IMF (Industrial manufacture); PREP (Preparation)
(C6, preparation of, by propene dimerization)

INDEX TERM: Ion exchangers
(acidic, isomerization catalysts, for dimethylbutene)

INDEX TERM: 120528-22-5, Amberlyst RTM 15
ROLE: CAT (Catalyst use); USES (Uses)
(catalysts, Amberlyst 15, for dimerization of dimethylbutene)

INDEX TERM: 120669-57-0, K 2634
ROLE: CAT (Catalyst use); USES (Uses)
(catalysts, Bayer catalysts K2634, for dimerization of di-Me butene)

INDEX TERM: 1344-28-1, Aluminum oxide (Al2O3), uses and miscellaneous
ROLE: CAT (Catalyst use); USES (Uses)
(catalysts, with sodium and potassium, for isomerization of dimethylbutene)

INDEX TERM: 563-43-9, uses and miscellaneous 2622-14-2 3264-82-2
ROLE: CAT (Catalyst use); USES (Uses)
(dimerization catalysts, for propene)

INDEX TERM: 115-07-1, 1-Propene, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(dimerization of, in manufacture of dimethylbutene)

INDEX TERM: 53571-10-1, Lewatit K 2631
ROLE: CAT (Catalyst use); USES (Uses)
(isomerization catalysts, Bayer catalysts K2631, for di-Me butene)

INDEX TERM: 563-79-1
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(isomerization of, sodium on alumina catalysts for)

INDEX TERM: 563-78-0P
ROLE: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, by dimerization of propene and isomerization)

INDEX TERM: 7440-09-7, Potassium, uses and miscellaneous 7440-23-5, Sodium, uses and miscellaneous
ROLE: CAT (Catalyst use); USES (Uses)
(supported on aluminum, catalysts, for isomerization of dimethylbutene)